Product Bulletin

Bulletin Number: P-2009-0169-Global-Rev1
Date: 2 December 2009

IP Phone 1165E Introduction

REVISION HISTORY

Date	Revision #	Summary of Changes
23 November, 2009	Original bulletin	Initial publication
2 December, 2009	Revision 1	Updated to show product has achieved Channel Readiness milestone; product advisements

Introduction

Nortel* is pleased to announce the introduction of the new IP Phone 1165E with the Nortel Communications Server 1000 Release 5.0 and higher.

This bulletin includes a summary of product information, and CS1000 installation considerations including important patch information for CS1000 Release 5.0 and 5.5. It also includes product advisements and additional references related to the IP Phone 1165E.

Main Topic

Nortel is pleased to announce an exciting addition to our award winning IP Phone 1100 Series. The IP Phone 1165E has achieved Channel Readiness status on December 2, 2009, and is proceeding to General Availability with the Nortel Communications Server 1000 Release 5.0 and higher, in Canada, US, EU, India, and other selected EMEA and Asia Pacific countries. Support in additional countries is planned and dependent on completing Regulatory compliance requirements. Support for the IP Phone 1165E on additional Nortel Communication Servers is dependent on the different Nortel Communication Server teams.

The IP Phone 1165E is currently on Controlled Release, and is visible for pre-GA quoting purposes in Enterprise Configurator 8.1 on November 23, 2009. The IP Phone 1165E is open for customer orders now through Merchandise. Shipments will commence upon December 2, 2009 with authorization until the product is Generally Available, which is dependent on Nortel receiving additional inventory and the ability to support all orders within regular lead time. It is recommended to keep the IP Phone 1165E on separate orders to avoid potential delays in other product deliveries.

* See last page for trademark information

The IP Phone 1165E builds on the IP Phone 1100 Series industrial design and offers a high resolution color display and new graphical user interface elements that improve the quality of the user experience. Targeted at the advanced professional, the IP Phone 1165E provides easy access to multiple lines and call processing features.

There are eight programmable Feature / Line keys on the phone itself[1], with another page of programmable soft keys accessed with the Shift feature. The IP Phone 1165E supports the IP Phone 1100 Series Graphical Expansion Module for additional programmable keys, and allows easier access to frequently called numbers or preferred features to enable better productivity.

The audio experience is enhanced through engineered audio tuning and supports wideband[1] with a newly stylized handset that has been softly contoured for additional comfort when using the handset. Wideband speakerphone and optional wideband headsets are also supported with the IP Phone 1165E. The IP Phone 1165E supports wired and wireless headsets, including USB and Bluetooth models. Note that Bluetooth® 2.1 is integrated into the IP Phone 1165E and supports simple secure pairing of headsets that support Bluetooth Wireless technology.

Customized applications[2] and information can be accessed using the IP Phone 1165E. The Graphical User interface supports multiple color schemes, background images, and a Digital Picture Slideshow mode when the phone is idle, that enables the user to fully experience the color display capabilities. Background images can include corporate logos or pictures loaded automatically onto the phone through a TFTP / HTTP configuration file, or can be personalized by the user with their own JPEG images loaded via a USB Flash Drive. For more information on how to use these features, see the product information at the following link: http://support.nortel.com/go/main.jsp?cscat=OVERVIEW&poid=22201

The IP Phone 1165E provides Gigabit Ethernet access on both the network and PC ports. The phone is power efficient and supports the IEEE 802.3af power over Ethernet standard as a Class 2 device. Proprietary Power over Ethernet methods are not supported. The IP Phone 1165E can also be powered with AC power using an optional Nortel global power supply and standard country-specific IEC cable.

1 Support for 8 user defined line / programmable softkeys is dependent on a future CS1000 release. With Rls 5.0, Rls 5.5 and Rls 6.0, the two extra keys (two top left keys beside the display) are not supported.
2 The IP Phone 1165E supports GXAS protocols, however, support for external applications through the Nortel Application Gateway is not available at product launch.

What's New

- QVGA color LCD TFT display
- 802.3af Class 2 POE compliant
- 8 programmable self labelled line/feature keys
- New local menu UI
- Display themes
- User selectable background
- Digital picture slideshow
- Updated call state icons
- Bluetooth 2.1
- USB flash drive support

- Leverages award winning IP Phone 1100 Series industrial design
- High resolution (240 x 360 pixels), QVGA color, Liquid Crystal Display
- Superior quality audio experience including wideband-ready speakerphone and handset
- Power efficient, with support for IEEE 802.3af PoE standard as Class 2
- Eight programmable feature/line keys, with additional page of keys with Shift feature
- Supports the IP Phone 1100 Series Expansion Module
- Integrated USB port for keyboard, mouse, or headset connectivity
- Secured communications with both standards-based signaling and media-path encryption along with network authentication for controlled access
- Integrated 10/100/1000 Base-T Auto- Sensing Ethernet switch for shared PC access (one LAN port and one PC port)
- Integrated Bluetooth 2.1 Audio Gateway supports standard headset profiles for enhanced mobility
- Supports Zero Touch Provisioning

Installation Considerations on CS1000

Note that for customers on CS1000 Release 5.0 or 5.5, patch MPLR28567 is required to enable the call server release to properly recognize the new IP Phone 1165E model. The initial launch of the IP Phone 1165E is with CS1000 R5.0, 5.5, and R6.0. The IP Phone 1165E is not planned to be supported on earlier CS1000 releases.

CS1000 Release	Patch Required	Set Type Configuration / Limitations
5	Yes: MPLR28567	Configure as type "1140". No support for extra 2 DN/Feature keys
5.5	Yes: MPLR28567	Configure as type "1140". No support for extra 2 DN/Feature keys
6	No	Configure as type "1165". No support for extra 2 DN/Feature keys

It is important to know that without the MPLR28567 loaded on each Signaling Server and VGMC as below, the 1165E will appear as set type 1175 on a CS1000 Rls 5.0 and CS1000 Rls 5.5. When the set type is 1175, it is not possible to administer the phone's TN to add, change, or delete it. Once the system is patched and the 1165E set is re-registered, auto-conversion takes place changing TN type to the supported one as shown in the table above.

Patch required	ISP1100/COTS	CPPM	ITG-P	SA	MC32S
R5.0	X	X	X	X	X
R5.5	X	X		X	X
R6.0					

It is required that the Element Manager is updated with a currency file that includes the 1165E. An updated Currency File has been created that includes the IP Phone 1165E software, and is posted on the Nortel Technical Support portal. The following table shows how the phone is displayed in the Telephony Manager and Element Manager interface.

CS 1000 Rls.	IP Phone	LD 11 Datablock (CLI)	TM 3.1	TM 3.2	TM 4.0	EM 5.0	EM 5.5	EM 6.0
5	1165E	1140	1140	1140	1140	1140	n/a	n/a
5.5	1165E	1140	n/a	1140	1140	n/a	1140	n/a
6	1165E	1165	n/a	n/a	1165	n/a	n/a	1165

IP Phone 1165E Software

The IP Phone 1165E has its own software file, version 0626Cxx. The current IP Phone 1165E software is: **0626C6E**

The IP Phone 1165E is based on the existing IP Phone 1100 Series and is current with the IP Client UNIStim 3.3 software. After GA, the next planned software update will be a UNIStim 4.x load for the IP Phone 1165E. Note that the IP Phone 1165E is not included in the initial UNIStim 4 support, and VPN is not a feature that is supported on the IP Phone 1165E upon its initial launch.

Software Upgrade

The 1165E provides the same three Software upgrade methods as the existing 1100 Series IP phones have always provided, listed below.

1) Automatic UFTP download initiated by the server
2) Automatic TFTP/FTP/HTTP download on Bootup
3) Manual TFTP/FTP/HTTP download from BootC (fault recovery method)

These methods are described in detail in the IP Phone Fundamentals NN43001-368 version 04.08. The first two methods are described below.

To use Method 1 to have the CS1000 Call Server automatically upgrade the 1165E with the most recent IP Phone software, it is required that you update the Element Manager to include an updated Currency File.

Upgrading to 0626C6E

The TFTP/FTP/HTTP download and upgrading of the phone's Flash memory takes a while. Please be patient, do not unplug/reboot the phone during the process!

- The file transfer takes 15 seconds or less, followed by another minute to burn the file into the Flash memory.
- During the Flash writing time, the phone displays the message "[FW] writing…" and flashes the LED.
- When finished writing the new FW, the LED stops flashing and the phone displays "[FW] finished", reboots, and comes up running the new FW version.

Method 1: Automatic UFTP Download Initiated by the Call Server

The Terminal Proxy Server (TPS) software download process requires the server to be able to identify the IP Phone 1165E phone before it can initiate the software upgrade process using the correct IP Phone software image. If it recognizes the 1165E's FW_ID, then the UFTP download occurs similar to all other existing IP Phones.

Note that a patch (MPLR28567) is required to ensure that the IP Phone 1165E is recognized properly on the CS1000 R5.0 and R5.5 releases. Also, it is required that the Element Manager is updated with a currency file that includes the 1165E. An updated Currency File has been created that includes the IP Phone 1165E software, and is posted on the Nortel Technical Support portal. http://support.nortel.com/go/main.jsp?cscat=OVERVIEW&poid=22201

For many network configurations, the IP Phone 1165E phone does not need to be configured to register to the TPS. A default setup facilitates automatic software download using full DHCP or the zero touch central configuration feature.

For the first time installed phones, the TPS instructs the phone to download the latest software version. During the subsequent software upgrades, the TPS will recognize if the phone has an older software version that what is on the TPS. The TPS then instructs the phone to do a software download for the latest software version.

NOTE: The CS1K call server only supports one FW load at a time for a given phone type.

Method 2: Automatic TFTP/FTP/HTTP Download at Bootup Procedure

The phone always executes this on bootup if a "Provision" address has been configured in the phone. It checks if an IP phone software (SW) upgrade is available by attempting to download a configuration file named "1165e.cfg". The config file is downloaded and the DOWNLOAD_MODE and VERSION information processed. If the DOWNLOAD_MODE is FORCED, the SW file is always downloaded regardless of the VERSION value. If the DOWNLOAD_MODE is AUTO, the VERSION field is compared to the phone's current SW version string. If the phone's existing version is older than the new version, the SW download is started.

Since the DOWNLOAD_MODE of FORCED always triggers a download of the software, it is recommended to only use that mode when the software must be downgraded and return the Mode to AUTO after all of the phones have been downgraded. Otherwise subsequent reboots of the phone will download the SW each time.

Setup

First, this method requires the TFTP/FTP/HTTP server to have a configuration file with the name listed in the table above along with the 0626C6E.bin file. The configuration file is a plain text file with the following fields:

Field Name	Field Value	Descriptions
[FW]		Section header for software download info
DOWNLOAD_MODE	**AUTO**	Recommended setting. The application looks at the version and downloads the FW if it is a newer version than what is on the phone.
	or	
	FORCED	The version is ignored and the FW is always downloaded. This should be used when upgrading a phone from a candidate build to a normal build (e.g. upgrading from version Cx26Cnn to 0626Cnn).
VERSION	0626C6E	The version string compared to what is on the phone.
FILENAME	0626C6E.bin	Image file name. Must match the filename of the actual FW file in the directory.
PROTOCOL	**TFTP** or **FTP** or **HTTP**	Download protocol. Set appropriately for your server type: TFTP, FTP or HTTP.
SERVER_IP	**xxx.xxx.xxx.xxx**	IP Address of the server in decimal

A sample of the configuration file is listed below for a TFTP server:

```
[FW]
DOWNLOAD_MODE AUTO
VERSION 0626C6E
FILENAME 0626C6E.bin
PROTOCOL TFTP
SERVER_IP 192.168.1.123
```

An example of the file for a FTP server:

```
[FW]
DOWNLOAD_MODE AUTO
VERSION 0626C6E
FILENAME 0626C6E.bin
PROTOCOL FTP
SERVER_IP 192.168.1.123
```

An example of the file for a HTTP server:

```
[FW]
DOWNLOAD_MODE AUTO
VERSION 0626C6E
FILENAME 0626C6E.bin
PROTOCOL HTTP
SERVER_IP 192.168.1.123
```

Upgrade Procedure

1. Configure the Server address. This can be done in one of two ways:
   - Use the Local Tool menu's Network Configuration page. Double press the Services key, nav right to Configuration, select 1. Network Configuration, then nav down until you get to the "Provision" item (or 3 Nav up presses). Enter the TFTP server's IP address and press "OK". Then reboot the phone.

     Note: The "Provision" field can have a URL entered in the following form:

     [<protocol name>://[<login>[:<password>]@]]<IP address or server name>[:<port>][/<path>],

     where the square brackets show what elements may be omitted.
     For example:

     tftp://192.168.33.50
     tftp://some.server.com
     ftp://my_login:my_psw@test.server.org
     http://some_login@one_more.server.ca:80/config_folder

     The default protocol is TFTP, so if no protocol precedes an IP address, TFTP is used. If a domain name of a server is used the DNS IP address is to be defined also.
   - Alternatively, you can download the address via the DHCP response TFTP IP field.
2. After the phone boots up it downloads the 1165e.cfg file.
3. After retrieving the .cfg file, the DOWNLOAD_MODE and VERSION fields are checked.
4. If a SW download is necessary, the phone downloads the SW file using the PROTOCOL field's protocol. The display will show "[FW] reading…".
5. If the download is successful, the display shows "[FW] writing…" and the blue LED starts to flash.
6. After the FW image has been written to the phone, the message "[FW] finished" is displayed, the LED stops flashing and the phone resets.
7. The phone then comes up and registers to the TPS with the new SW version.

Product Advisements

CS1000 Installation Considerations

> For instructions on patch MPLR28567 see page 4 of this Product Bulletin
> Line / Feature Key support - The IP Phone 1165E has 8 (eight) programmable feature/line keys but only six are supported in its initial release with CS1000 R5.0, R5.5.and R6.0. The two keys on the top left of the display cannot be programmed for feature or line use at the initial launch of the IP Phone 1165E. The CS1000 Plan of Intent to support these two additional keys is with a future release (after 6.0).

IP Phone Software Upgrade

> For instructions on how to upgrade the IP Phone 1165E software using TFTP or UFTP, see the 'IP Phone 1165E Software' section starting on page 4 of this Product Bulletin. If your Call Server does not include an 1165E SW file, use TFTP to upgrade the phones software.
> To use the UFTP method and have the Call Server automatically upgrade the 1165E with the most recent IP Phone software, it is required that you update Element Manager to include an updated Currency File. An updated Currency File has been created that includes the IP Phone 1165E software, and is posted on the Nortel Technical Support portal.

http://support.nortel.com/go/main.jsp?cscat=OVERVIEW&poid=22201

Power over Ethernet (PoE): Standard IEEE 802.3af and local power options only

> The IP Phone 1165E does not support proprietary Power over Ethernet options, including Cisco proprietary PoE methods. Customers using pre-standard or proprietary PoE will not be able to power the IP Phone 1165E, and can either use the local power supply option or upgrade their Ethernet Switch equipment to support 802.3af PoE.

USB Flash Drive Compatibility:

> Only USB flash drives with a single partition are compatible with the 1165E phone.
> Some USB flash drives are not read when connected to the 1165E phone.

Application Gateway 2000 & Graphical External Application Gateway support

> The IP Phone 1165E supports GXAS protocols, however the Nortel.Application Gateway 2000 support for the IP Phone 1165E is not available at launch.

Image Directory – amount of freed memory is not calculated correctly.

> When using the Delete key or DELETE_FILES command in the 1165e cfg file, the amount of freed memory is not correctly calculated by the 1165E, and the phone may show that the directory is full when it is not.
> Overwriting the existing files, that is, downloading new images with the same filename instead of specifically deleting them first will avoid the memory calculation issues.
> A fix is planned for an upcoming software maintenance load.

IP set freezes after three times combo box is opened

> If a combo list box is currently open and the Quit hard key (stop sign key) is pressed to exit the local menu dialog, then the dialog can be left in an incomplete closed state.
> When you return to the dialog you may find it has no highlight or the dialog navigation appears erratic.
> This problem can be avoided by simply closing the combo list box before quitting the dialog or by using the Cancel and Exit softkeys instead of the Quit hard key to quit a dialog.

GEM icons to be darker when attached to IP Phone 1165E

> If the 1165E's display contrast is set low when a GEM is attached, the new icons may be difficult to see on the GEM display.
> This can be worked around in a few different ways:
  - Turn up the display contrast.
  - Use the "Simple Icons" instead of the new icons. To select these icons, go to the Display Settings dialog under the Preferences menu and check the "Use Simple Icons" check box.

Headset Compatibility

The Nortel IP Phone 1165E supports the following types of headsets:

- Wired headsets with an 4P4C modular connector
- Bluetooth Wireless headsets via an integrated Bluetooth 2.1 audio gateway
- USB audio devices including the Nortel Enhanced USB Headset Adapter, the Nortel Mobile USB Headset Adapter, the Algo 4900 USB Analog Terminal Adapter, and selected wireless USB headsets from Plantronics and Jabra. Please contact Plantronics or Jabra for details on compatible wireless headsets.

While Nortel does perform basic testing of third-party headsets for use with the IP Phone 1165E, it is ultimately the customer's responsibility to test this equipment in their own environment to determine suitable performance. Due to the many environmental, network, and ergonomic differences in which the IP Phone 1165E may be deployed, there is not a single best or recommended solution for headsets.

References and Related Documents

Additional product information is available for external customers, Channel Partners, and Distributors. Please go to the following link to access this information.
http://support.nortel.com/go/main.jsp?cscat=OVERVIEW&poid=22201

For a brief video on the new IP Phone 1165E features, see the following link:
http://www.youtube.com/watch?v=UEvfIwi2f48

Additional information can be obtained from the following related documents.

User Documentation and NTP Documents:

> IP Phone 1165E Getting Started Card
> IP Phone 1165E User Guide with CS1000
> IP Phone 1165E Quick Reference Card for CS1000 Features
> IP Phone 1165E Contact Center User Guide
> IP Phone Fundamentals NN43001-368 version 04.08.
> Quick Guide for the new 1165E Features

Product Bulletins on the Partner Information Centre (PIC):

> **P-2009-0075-Global**. UNIStim Firmware Release 3.3 for IP Phones: The IP Phone 1165E is based upon Nortel IP Phone UNIStim Firmware Release 3.3 code-base, and supports the new features described in Product Bulletin P-2009-0075-Global.
> **PAA-2009-0169-Global**: IP Phone 1165E

IP Phone 1165E Knowledge Transfer Kit on the Partner Information Centre (PIC)

Ordering Guidelines and Procedures

New top level product codes for the IP Phone 1165E are listed below. Similar to all IP Phone 1100 Series, the phone can be ordered with either icon or English text keycaps on it. The picture on page 3 of this Product Bulletin shows the phone with icon keycaps, and the picture labels are the words that would be on the English text versions for those keycaps.

Note that the keycaps on the feature keys of the IP Phone 1165E have been modified to be easily removable, without the need of the keycap removal tool required for other Nortel IP Phones. The new separately orderable keycap kits below are available for the new keycaps on the IP Phone 1165E, and are not currently supported on the other IP Phone 1100 Series models.

The optional global power supply and country specific IEC cables are listed as well if local AC power will be used. For phones deployed in networks that support Power over Ethernet as noted above, the global power supply and IEC cable are not required.

Top Level Product Codes (Configurable in EC and Separately Orderable)		
NTYS07AAE6	N0181372	IP Phone 1165E - Graphite w/ Icon Keycaps w/o PS
NTYS07BAE6	N0181373	IP Phone 1165E - Graphite w/ Eng Keycaps w/o PS

Separately Orderable Key Cap Kits		
NTYS16AAE6	N0181374	IP Phone 1100 Icon Key Cap Kit (1165E)
NTYS16BAE6	N0181375	IP Phone 1100 Eng Key Cap Kit (1165E)

Global Power Supply & Country Specific IEC cables		
NTYS17BAE6	N0146475	IP Phone Global Power Supply (2000, 1100, 1200) (RoHS)
NTYS14AAE6	N0089603	Standard IEC Cable - North America (RoHS)
NTTK16ABE6	N0114986	Standard IEC Cable – Europe

NTTK17ABE6	N0109787	Standard IEC Cable – Switzerland
NTTK18ABE6	N0109881	Standard IEC Cable – UK
NTTK22ABE6	N0109788	Standard IEC Cable – Denmark

*Nortel, the Nortel logo and the Globemark are trademarks of Nortel.

©2009 Nortel Networks Limited. All rights reserved. Nortel, the Nortel logo, and the Globemark design are trademarks of Nortel Networks Limited. All other trademarks are the property of their respective owners.

The information in this document is subject to change without notice. Nortel reserves the right to make changes, without notice, in equipment design as engineering or manufacturing methods may warrant. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Nortel Networks Limited.

To view the most recent version of this bulletin, please visit Nortel's Partner Information Center on the web at: http://www.nortel.com/pic.